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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,830

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Riaan Lingenfelder Van Wyk

MDT0005US

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06/18/2009

CANTOR COLBURN, LLP

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EXAMINER

CLARK, CHRISTOPHER JAY

ART UNIT

PAPER NUMBER

2836

NOTIFICATION DATE

DELIVERY MODE

06/18/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

Office Action Summary

Application No.

10/578,830

Applicant(s)

VAN WYK ET AL.

Examiner

CHRISTOPHER J. CLARK

Art Unit

2836

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-19 is/are allowed.
- 6) ☒ Claim(s) 13 and 20-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to the RCE filed April 14, 2009.

Response to Arguments

1. Applicant's arguments filed April 14, 2009 have been fully considered but they are not persuasive.
2. In re Claim 13, the Applicant argues Bossarte does not teach that the blast control unit (20) is directly connected to the plurality of detonators because it is always separated by a distribution panel (22). As discussed in the action, Lines 64-66 of Column 5 of Bossarte teaches that the interface module (20) and distribution panel (22) may be integrated into a single package. It is this integrated package as a whole and all circuitry contained within it that the examiner considers as the "blast control unit", which is therefore directly connected to the plurality of detonators (4).
3. Furthermore the Applicant has assumed that the Examiner made an error in assigning the term "blast key" to the battery (27) of Bossarte as opposed to the key switch (25) of Bossarte. This is not the case. Similar to the Applicant's own disclosed blast key, the blast key of Bossarte is not a "key" in the most commonly perceived sense, but is a source of power for providing the needed detonation energy, making it a "key" component. The examiner would also like to clarify that the blast key of Bossarte is the battery (27) alone, and not a battery (27) and key switch (25) combination.
4. The Applicant also argues that the battery/blast key (27) of Bossarte would not be capable of dismantlement because despite what the drawings may suggest, the battery would be enclosed within the interface module. The examiner has found no evidence within Bossarte to

support such a statement and would like to remind the Applicant that Drawings within an application are enabling disclosures, see MPEP 2125.

5. The newly amended claims have also been addressed as seen below.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. ***Claims 13, 20, 21, 22, and 23 are rejected*** under 35 U.S.C. 103(a) as being unpatentable over Bossarte et al (6,490,977).
8. *In re Claims 13 and 20*, Bossarte teaches a blasting arrangement as seen in Figure 2 which includes:

- a plurality of detonators (4)
- a blast control unit which is directly connected to the plurality of detonators (Column 5
Lines 64-66 state that the distribution panel 22 and interface unit 20 may be included in a single package, this integrated package as a whole and all circuitry contained within it is considered as the "blast control unit", which is therefore directly connected to the plurality of detonators)
- a blast key (27) connected to the blast control unit which includes a blast energy generator (27), the generator is operable to produce a voltage at a level which is suitable for arming the detonators using energy selected from a source in the blast key (Lines 35-

46 of Column 6 teach that the blast key 27 provides energy at a level suitable to carry out detonation)

9. Bossarte does not specifically teach that the blast key 27 is removably connected to blast control unit.
10. It would have been obvious to one having ordinary skill in the art at the time the invention was made to allow the blast key 27 to be detachable from the wires 28 of control unit so that the blast key can be more easily transported or replaced upon failure, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlicnran*, 168 USPQ 177.
11. *In re Claim 21*, batteries are known in the art to comprise a housing that protects and contains the energy source within.
12. *In re Claim 22*, Bossarte teaches a control logic unit (53) which is responsive to at least one external control device to have the blast energy generator to produce the voltage at a level which is suitable for arming the detonators (Column 7 Lines 35-60).
13. *In re Claim 23*, Bossarte teaches that the external control device is a communication link to the control logic (Column 7 Lines 55-60).
14. ***Claim 24 is rejected*** under 35 U.S.C. 103(a) as being unpatentable over Bossarte et al (6,490,977) in view of Phinney (3,721,860).
15. *In re Claim 24*, the teaching of Bossarte has been discussed above, furthermore, Bossarte teaches that the blast key which provides the required energy for detonation is a battery (27), but does not disclose that the manually operable input device is mounted to the body of the blast key.

16. Phinney teaches a hand cranked power supply (10) for use in detonation schemes that comprises a manually operable input device (103) that is mounted to its body as seen in Figure 2 (Column 4 Lines 17-40). Phinney teaches that such hand cranked power supplies are advantageous over batteries since they do not require recharging or replacement which is desirable when operating in remote locations (Column 1 Lines 53-59).

17. It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the battery/blast key of Bossarte with the hand cranked supply/blast key of Phinney, since Phinney teaches that such hand cranked power supplies are advantageous over batteries since they do not require recharging or replacement which is desirable when operating in remote locations.

18. The examiner would like to note that upon modification, the control logic unit (53) of Bossarte is responsive to the input device (103) of Phinney since it relies on the voltage produced by the input device (103) to provide power to itself and to the detonators. Also, the input device of Phinney which replaces the battery (27) of Bossarte upon modification would be physically connected to the control logic unit via wires (28, as seen in Figure 2) and the power converter (55, as seen in Figure 4).

Allowable Subject Matter

19. Claims 14-19 are allowed.

20. Claims 14-19 recite a blasting arrangement that includes among other components a blast control unit which is physically incapable of directly providing a voltage at a level suitable for arming detonators, and a blast key that is removably connected to the blast control unit and includes a blast energy generator and a switch which controls operation of the blast energy

generator, wherein when the blast key is connected to the blast control unit, the blast energy generator is operable to produce a voltage at a level which is suitable for arming the detonators. The featured limitations discussed above in combination with the other limitations of the claims is not anticipated by the prior art of record, nor would it have been obvious to one having ordinary skill in the art to modify the prior art of record in order to make the aforementioned limitations unpatentable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER J. CLARK whose telephone number is (571)270-1427. The examiner can normally be reached on M-F, 10:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on 571-272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner, Art Unit 2836

CJC

6/12/2009